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*The Epiphysis of Teliosts and Amia.* CHARLES HILL. Jour. Morph. Vol. IX., pp. 237-266. Pls. XII. and XIII. 1894.

The special significance of this paper consists in its filling a gap in our knowledge of the pineal structures in the bony fishes. In connection also with Locy's observations on Elasmobranchs, it is of interest to note that Hill finds two independent outgrowths arising from the roof of the mid brain in the teliosts examined and in amia. These together form the epiphysis, but each vesicle remains distinct. The author considers it probable also that in their primitive position they were side by side and subsequently become crowded into the median line by the growth of the hemispheres. The plates, twenty-two figures, give the clearest possible account of the subject.

*Comparative Study of the Epiphysis and Roof of the Diencephalon.* A. D. SORENSON. Jour. Comp. Neurol., Vol. IV., pp. 12-72. 1894.

This paper gives the literature of the pineal region more in extenso than any that we have. Each author is treated separately and the main points have been gathered together, summaries copied, etc., so as to give the organ as it has been described in the different classes of vertebrates.

*Treatment and Prophylaxis of Insanity.* JOHN PUNTON, M. D. Alienist and Neurologist, Vol. XV., pp. 52-66. St. Louis, 1894.

The particular form of mental disease treated by our author is melancholia, the most common and most easily managed of insanities. It may arise as a congenital neurosis or be acquired. Primarily, according to Meynert and Clouston, melancholia arises from trophic disturbances, malnutrition, of the cortex. This theory the author permits to dominate his treatment. Insomnia is a frequent symptom, but drugs which have a tendency to interfere with nutrition, opium and the bromides, are contra-indicated. Sulphonal is the best remedy to apply in these cases. Everything must be done to bring up body weight, generally deficient in melancholiacs, and force nutritive processes to the utmost. For this purpose quinine, strychnia, phosphorus, arsenic, cod-liver oil, mineral acids, vegetable bitters, hypophosphates, et al., and especially foods, milk and eggs: "Three quarts of milk a day and six eggs for months." Yet any treatment will fail without daily exercise in the open air. The chief aim of the paper is to direct the attention of the medical profession to the importance of preventive measures while there is possibility of cure. If this in the case of congenital defects be begun at birth and even before, and continued through nursery and school life, tendencies of this character may be eradicated. An index of especial value in cases tending toward melancholia is body weight. Patients should weigh at least once a month, and if any loss is detected, they should adopt measures immediately to make it up and keep it up.

*The Value of Sugar, and the Effect of Smoking on Muscular Work.* VAUGHAN HARLEY. Journal of Physiology, Vol. XVI., pp. 97-122, London, 1894.

The experiments were made in Mosso's laboratory with the ergograph. Nasse, Brücke and Weiss have shown that glycogen in the muscles decreases in amount during activity and accumulates during rest. And more recent researches of Chauveau and Kaufmann have demonstrated that sugar in the blood disappears much more rapidly when circulating in an active than in a resting muscle.

With this as a basis, the author attempts to decide the practical value of sugar as an energy-producing food. He finds in using the ergograph that he fatigues much as Lombard does, viz., with periods of partial recovery. He can thus use the point of first fatigue as a measure of the condition of his muscles. As another measure he uses the total amount of work accomplished by the first thirty contractions. Diet was carefully regulated, and the experiments were repeated daily at the same hours. As in all former work in this line, practice was found to increase strength and regular diurnal variations occur. The total amount of work on a sugar diet is almost equal to that on a full diet, although fatigue occurs sooner. Days of fast compared with days on which 500 gms. of sugar were taken, showed an increase in amount of work for the sugar days of from sixty-one to seventy-six per cent. The effect of sugar added to a light meal increases work from six to thirty-nine per cent.; and even when added to a heavy meal, gives an increase of from two to seven per cent. Smoking has a much slighter effect on Harley than on Lombard, causing a diminution in work scarcely demonstrable.

*Neue Darstellung vom histologischen Bau des Centralnervensystems.*

RAMON Y CAJAL. *Archiv für Anatomie und Entwicklungsge-schichte*, pp. 319-423, 35 Figures in text. Leipzig, 1893.

In the above form we are presented with a translation from the Spanish, to which numerous revisions and additions, both in text and figures, have been made by Cajal himself. It furnishes a clear connected statement of this successful investigator's views and researches up to date, and in addition to this a running critical review of the work of others. Specifying, in a single instance, we note that Cajal denominates Dogiel's position as to anastomosis of cell processes as heretical, "ketzerisch." But the good reasons which he is able to advance remove from the sentence all taint of the Spanish inquisition. The spinal cord, cerebellum, cerebrum, different regions, retina and olfactory bulb are treated in order. No brief review of this important paper can be attempted.

*Report in Pathology (upon gross and microscopical lesions found in thirty-eight cases, autopsies of insane patients).* T. P. PROUT. *Annual Reports of the New Jersey State Hospitals*, 1893, pp. 99-117.

Dr. Prout is resident pathologist in the Morris Plains Asylum, and is to be commended upon the industry and patience with which he has dealt with his difficult problems. Gross lesions, either in the brain or its membranes and blood supply, are demonstrable in all cases. Among these, thinning of cortex and atrophy of convolutions with diminished or increased consistency of brain substance, anæmia, and œdematous and opaque condition of the pia, are especially frequent. Nearly all the cases were chronic, over half being terminal dementia (thirteen) and general paralysis (seven). Concerning his microscopical findings, Dr. Prout says: "The changes in the cells in all these cases were, it seems to me, ample to account for the mental disturbance manifested, provided we may consider the cortical cell the seat of mental activity, a point quite generally conceded." Degenerations of all sorts, fatty, pigmentary and granular, vacuolation of cell protoplasm and especially of nucleus, with fragmentation of the nucleus, are described in some detail and are figured. It is probably to be put to the account of Dr. Prout's equipment that no brain weights appear